- Open Systems Architecture
- Understanding and Using Data Rights
- Better Buying Power

DPAP/DP Contracting Training Session

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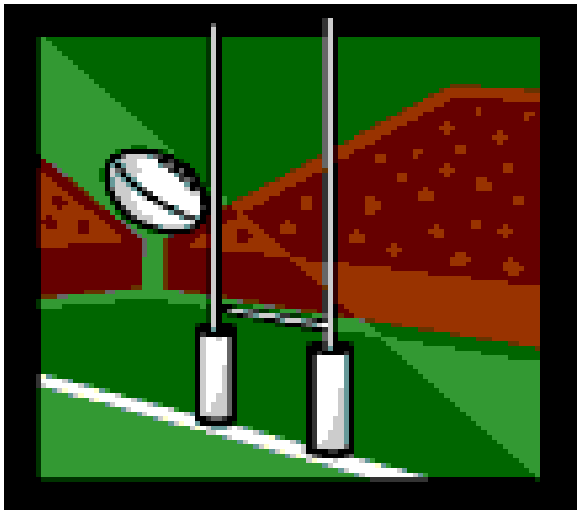
DOD OPEN SYSTEMS ARCHITECTURE AND DATA RIGHTS TEAM

Crafting a Market Place
Maturing the Defense Contracting Environment



Defining Our Future

Risk-prudent competition

Business Architectures that mirror Technical Architectures

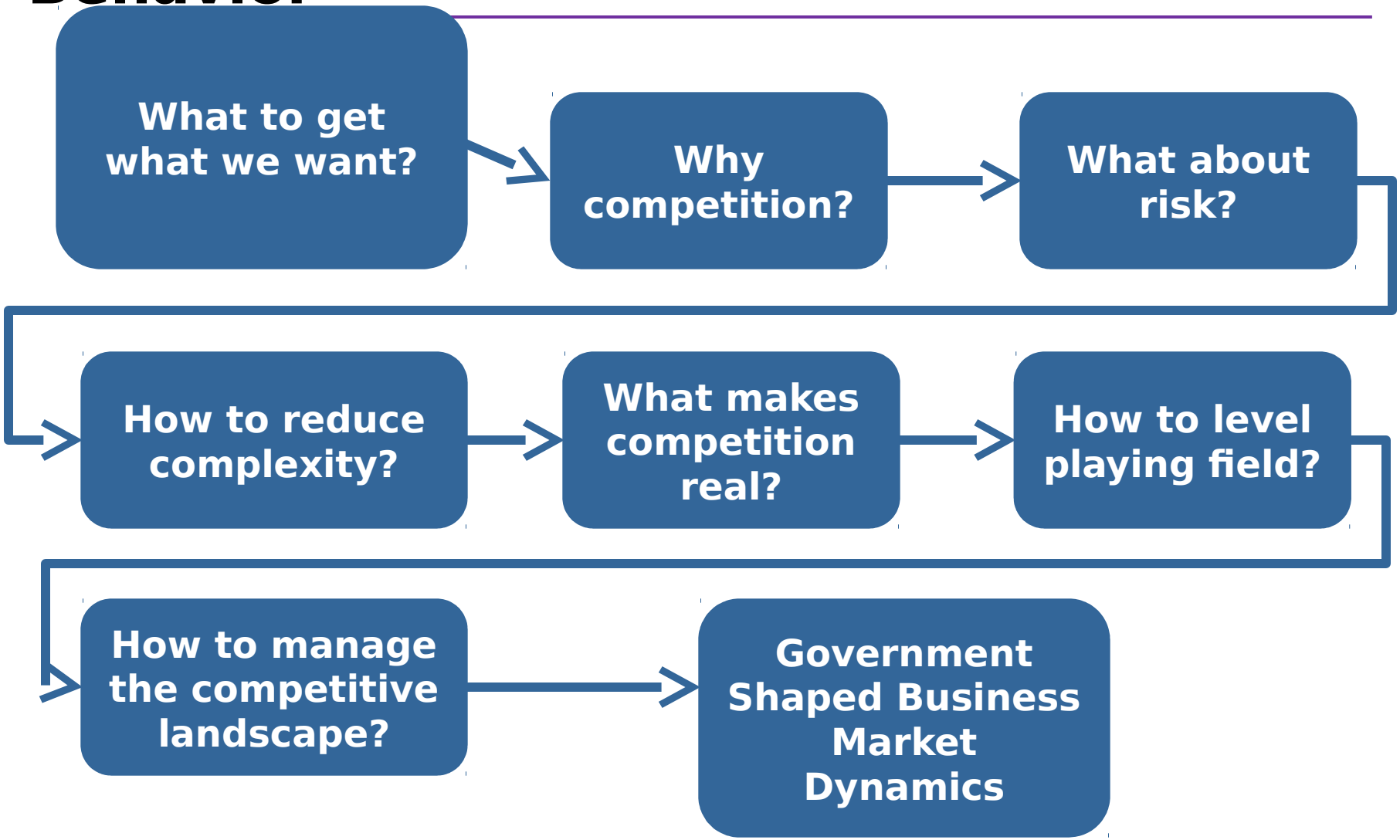
Constant battle rhythm of competition

Level playing field

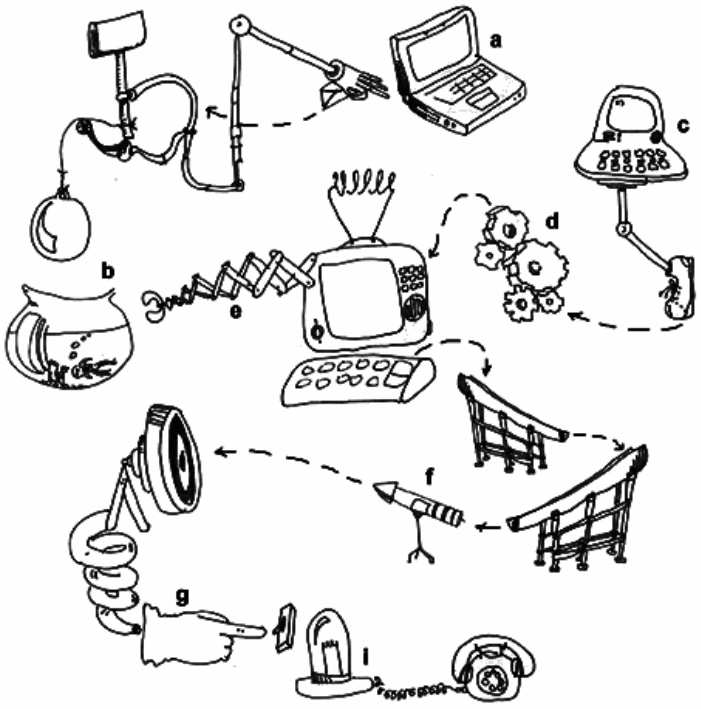
Wider access to innovation

How do we establish real acquisition choice?

Strategy for Achieving Beneficial Market Behavior


What to get what we want?
Why competition?
What about risk?
How to reduce complexity?
What makes competition real?
How to level playing field?
How to manage the competitive landscape?
Government Shaped Business Market Dynamics

Technology-centric architecture



Business-centric architectures

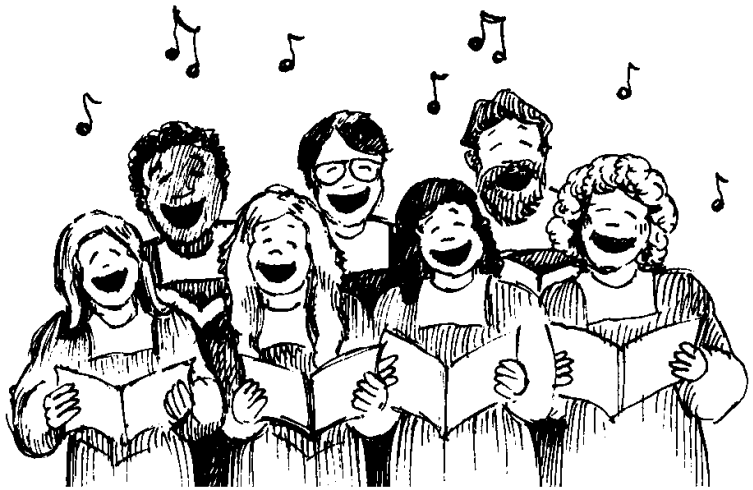
Better Buying Power 2.0
Promoting Effective Competition for the Life Cycle

This item is continued from BBP 1.0 and will focus on improving the Department's early planning for open architectures and the successful execution of the plan to provide for open architectures and modular systems. This will include the **development of a business model and associated intellectual property strategy** (data rights planning) that can be implemented over the lifecycle of the product, starting while competition still exists.

Enforce open system architectures and effectively manage technical data rights;

https://acc.dau.mil/bbp

Many Different Voices

Consistent Contract Language

Open Systems Architecture
An Integrated Business and Technical Strategy

OSA merges technical architecture with open business model:

- OSA = Technical Architecture
  - Open standards, published key interfaces, full design disclosure
  - Modular, loosely coupled but highly cohesive
- OSA = Open Business Model
  - Within Government: Transparency and leveraging of innovation across the Enterprise
  - With Industry: Sharing risk, asset reuse and reducing total ownership costs
- Data Rights = License Rights for Technical Data and Computer Software
- Vendor Lock = Prevented from bringing in new players and exercising acquisition choices

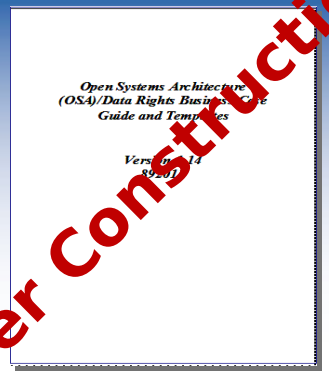
A Successful Open System Architecture can be:

- Added to
- Modified
- Replaced
- Removed
- Supported

--- by different vendors throughout the life cycle

Coordinated Suite of Products

Open Business Model & IP Strategy



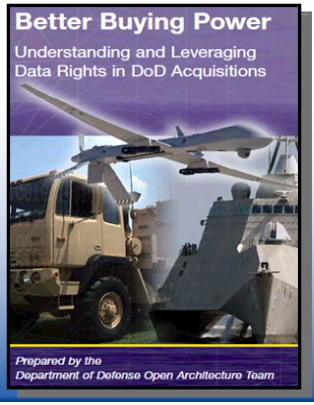
Under Construction

DoD OSA Contract Guidebook

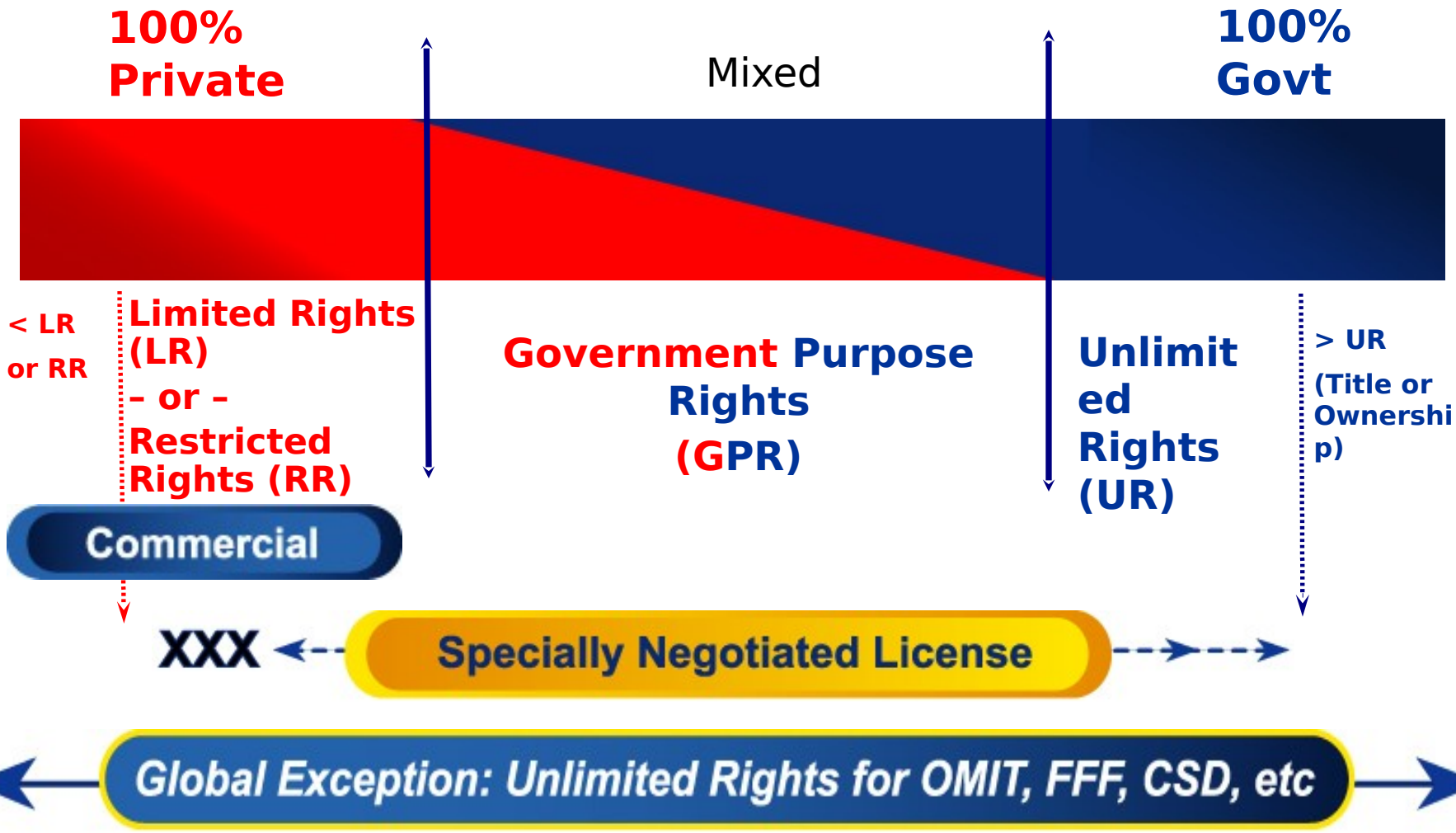
Training

Defense Acquisition University

Strategic use of IP


Better Buying Power
Understanding and Leveraging
Data Rights in DoD Acquisitions
Prepared by the
Department of Defense Open Architecture Team

Development Funding_



Government License Rights

<u>Within Government</u>

Modify, reproduce, use, display, perform:

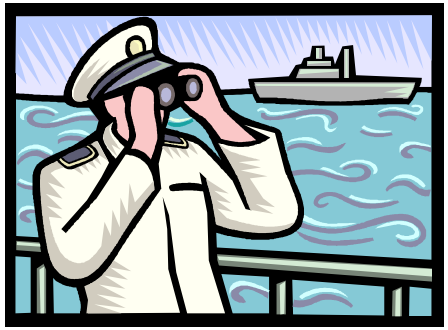
UL

GPR

SBIR

RR

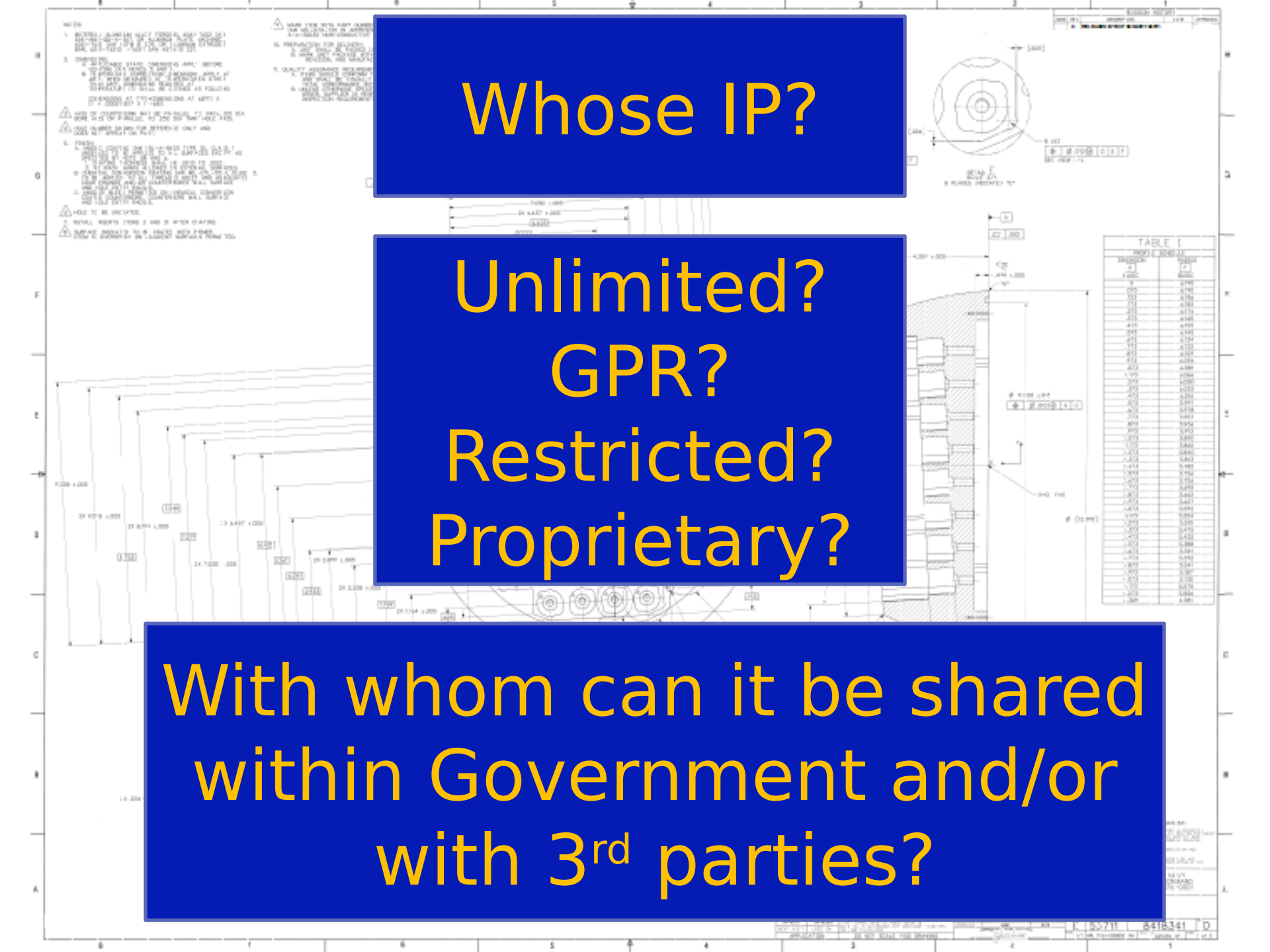
LR



<u>Third Parties</u>

UL

GPR (with NDA and for Government purposes

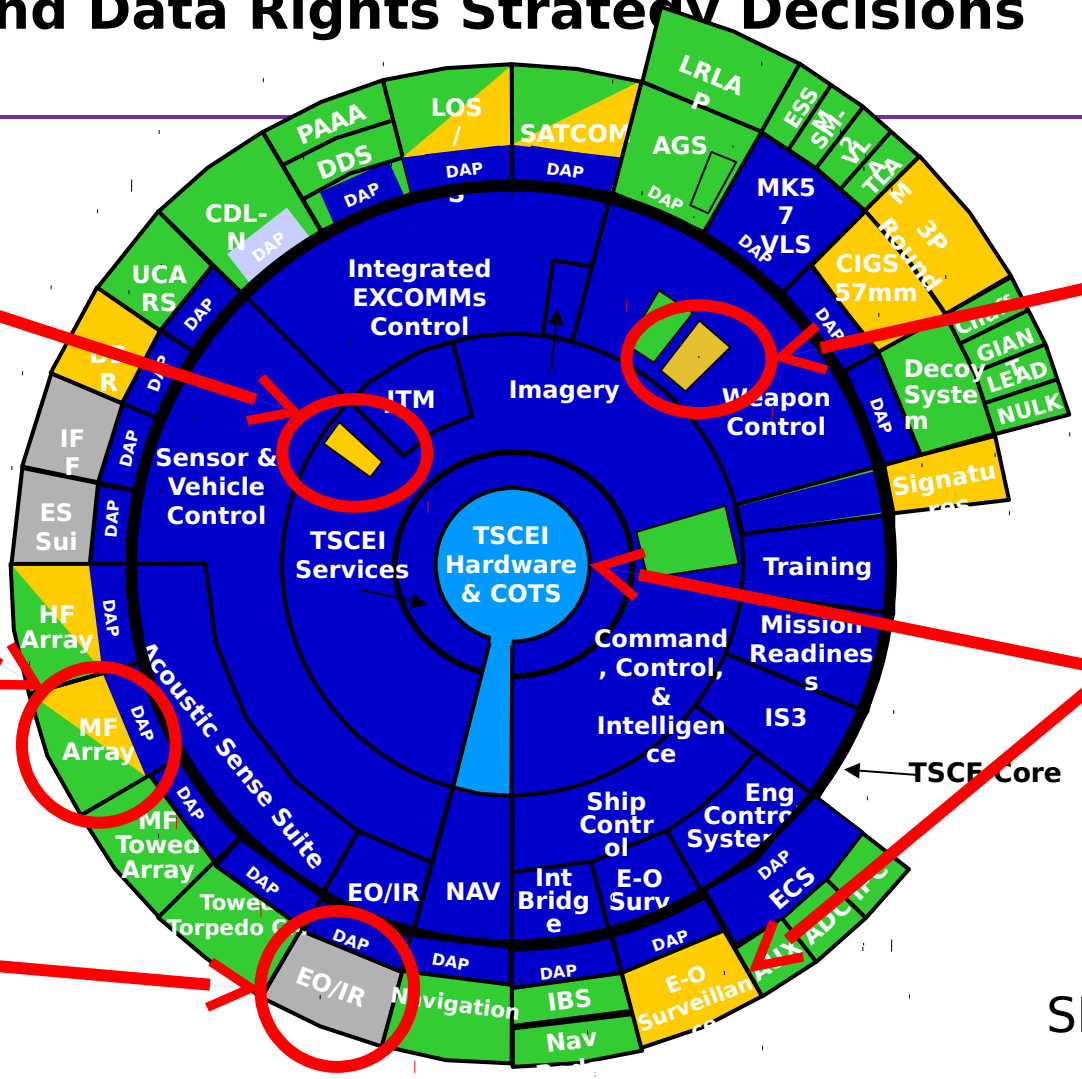

Whose IP?
Unlimited?
GPR?
Restricted?
Proprietary?
With whom can it be shared within Government and/or with 3rd parties?

IP and Data Rights Strategy Decisions

What limits competition and third party product integration?

How do we manage acquisition of component s?

Where can we use SNLs to drive fruitful market forces?



Where do we want innovation from small business?

Where is it acceptable to have COTS, limited, or restricted rights?

SBIR?

Unlimited
GPR
COTS
Restricted Rights
To Be Negotiated

What does your map look like?

Approach to Breaking Vendor Lock

Establish an Environment for

- **Publish the intent to compete**
- **Establish Gov't/Industry/Academia forum**
- **Establish a Flexible Contracting Approach**

Leverage and Exercise Data Rights

- **Assess what you have and what you need**
- **Determine what the Government has unlimited rights in**
- **Require delivery of non-delivered CDRLs, confirm that markings are correct and assert data rights**

Change approach to Systems

- **Develop a common architecture across a product line or similar Programs of Record**
- **Functionally decompose legacy programs**

Hold Competition

- **Create an alternative**
- **Limit integrator role**
- **Use GPR for next competition**
- **InJect OSA through technical insertions**
- **Use government labs for integration**

Establish an Environment for Change

past performance evaluation

- **Associate contractors sink/swim together**

Establish an Environment for

- **Incentive fees**
- **Include OSA and data rights as part of evaluation**
- **Reward reuse in evaluation criteria**

Case Study: ONR SEWIP Program

- Multi-Function Electronic Warfare (MFEW) was prototype by Office of Naval Research (ONR)
- ONR asserted Government Purpose Rights (GPR) on most of the hardware and software
- Surface Electronic Warfare Improvement Program (SEWIP)
  - Productionized MFEW
  - Provided MFEW GPR data as GFI with the RFP
- SEQIP RFP - rights were evaluated (Contract Guidebook)
- The RFP required priced option for data and data right and included evaluation criteria on that option in the RFP
- This resulted in all offerors addressing data rights
- Some IRAD offered as GPR by contractor

Open Architecture Tools and Resources

DoD OSA and Data Rights Team

Naval Open Architecture Enterprise Team (OAET)

Open Architecture Website: https://acc.dau.mil/oa

Defense Acquisition University Continuous Learning Modules

- Open Systems Architecture
- Software Reuse
- Data Rights

Open Architecture Assessment Tool (OAAT) Version 3.0

Key Open Sub-Systems (KOSS) tool

FORGE.MIL community - share

DoD Open Systems Architecture Contract Guidebook For Program Managers v.1.0

Naval OSA Strategy and Business Innovation Initiative

Message to Industry

We will use Open Business Models and assert our Data Rights to pursuing competition and get a better deal

More opportunities to win work by competing

- Platform,
- System,
- Component

We will use competition more aggressively…

Breaking Vendor Lock and obtaining a better deal is our responsibility

Contracting Challenge

Can a qualified, capable third party – Big or Small . . .

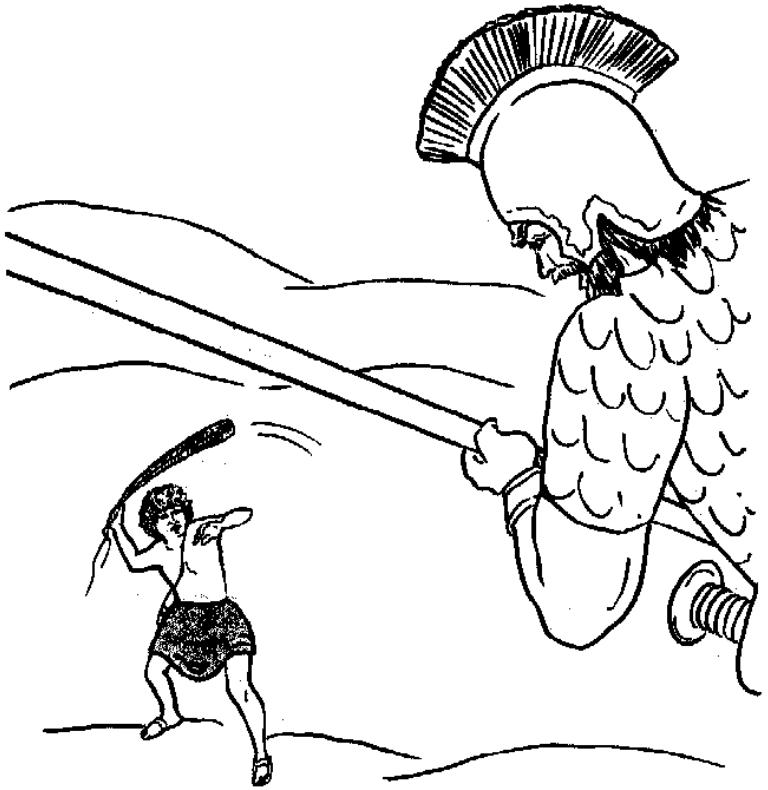
- Add,
- Modify,
- Replace,
- Remove, or
- Provide support

. . . based on an open business model with Open Systems Architecture?

Intellectual Property Rights
Richard Gray

DoD Open Systems Architecture Contract Guidebook for Program Managers v.1.0

Market Entrance Barriers



Level Playing Fields

Agenda

Dependencies between Contracting and OSA

Contents of the Guidebook

Highlights of Guidebook v.1.0

GREATER VALUE, INNOVATIVE SOLUTIONS FOR THE WARFIGHTER
DoD OPEN SYSTEMS ARCHITECTURE
Contract Guidebook for Program Managers
v.1.0
SEPTEMBER, 2012
Prepared by the Department of Defense Open Systems Architecture Data Rights Team
Distribution Statement A: Approved for Public Release; distribution is unlimited

Compendium of Best Practices Can Help PMs

Leverage a consistent message to Industry

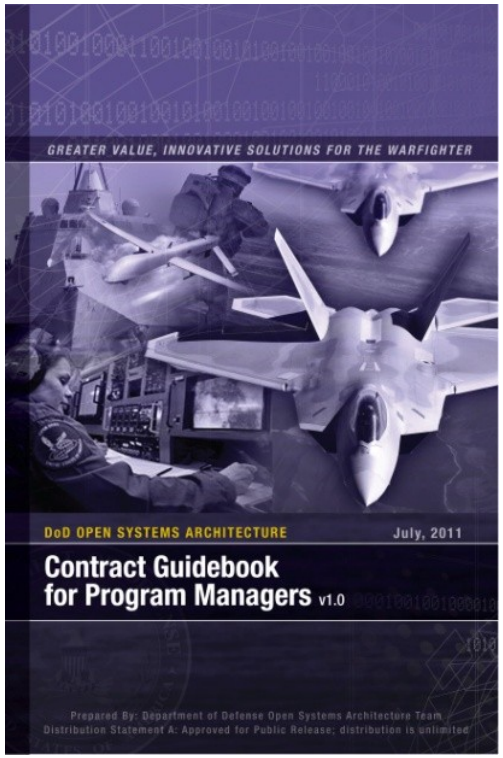
Reduce our risk in contracting:

- Statement of Work
- Deliverables
- Instructions to Offerors and Grading Criteria

Leverage Data Rights for the life cycle

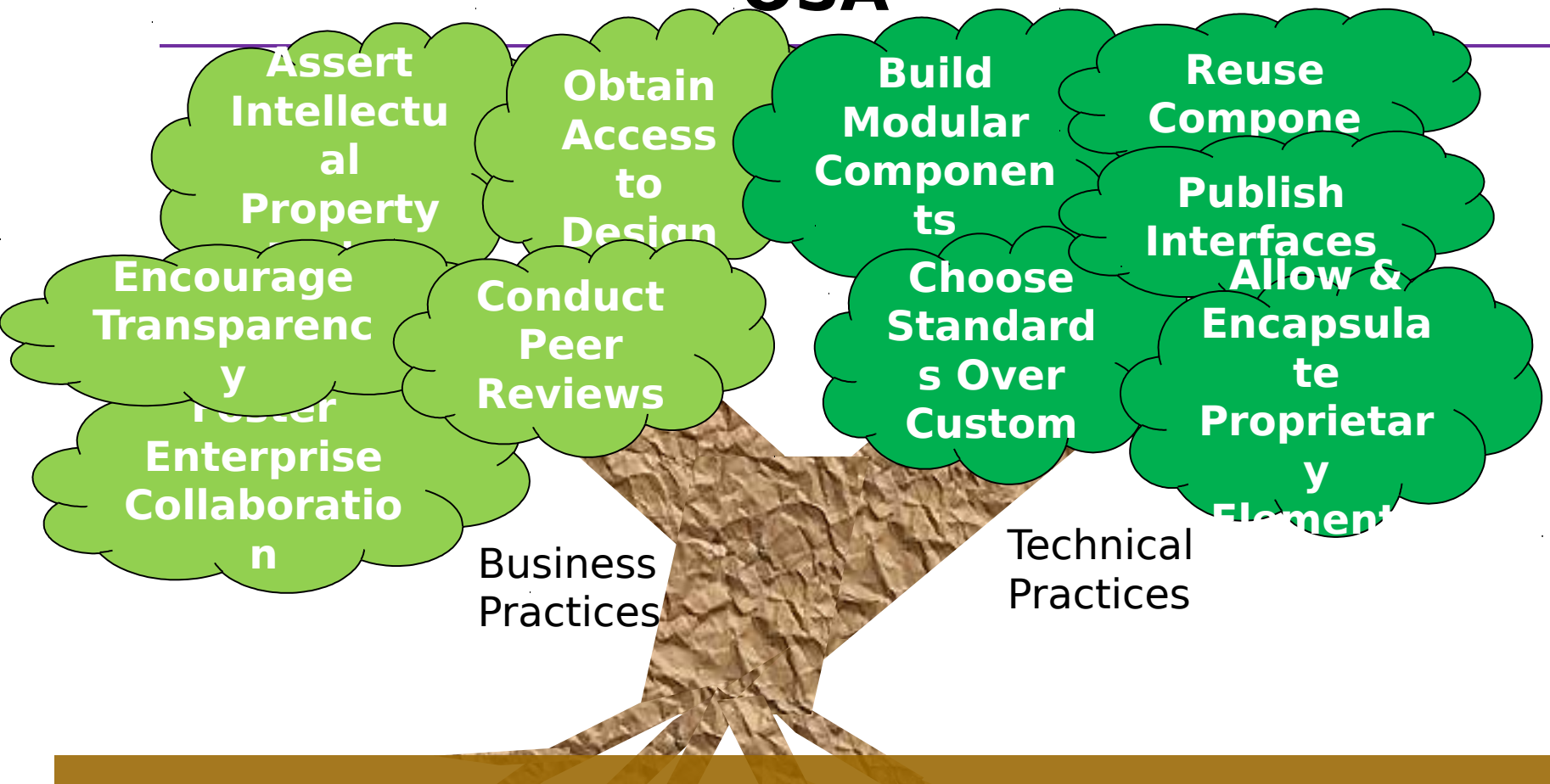
Capture OSA Best Practices for the program

- Early-and-often Design Disclosure
- Breaking Vendor Lock
- Peer Reviews for technology evaluation
- Minimize duplication / maximize Enterprise value


GREATER VALUE, INNOVATIVE SOLUTIONS FOR THE WARFIGHTER
DoD OPEN SYSTEMS ARCHITECTURE
July, 2011
Contract Guidebook for Program Managers v1.0
Prepared By: Department of Defense Open Systems Architecture Team
Distribution Statement A: Approved for Public Release; distribution is unlimited

https://acc.dau.mil/osaguidebook

Dependencies between Contracting and OSA



Practices Rooted in the Contract

Contents of the Guidebook*

Customizable Cut-and-Paste Contract Language

- Section C: Statement of Work
- Section H: Special Contract Requirements
- Section L: Instructions to Offerors
- Section M: Evaluation Criteria

Recommendations for Incentivizing Contractors

- Many opportunities for shaping market forces

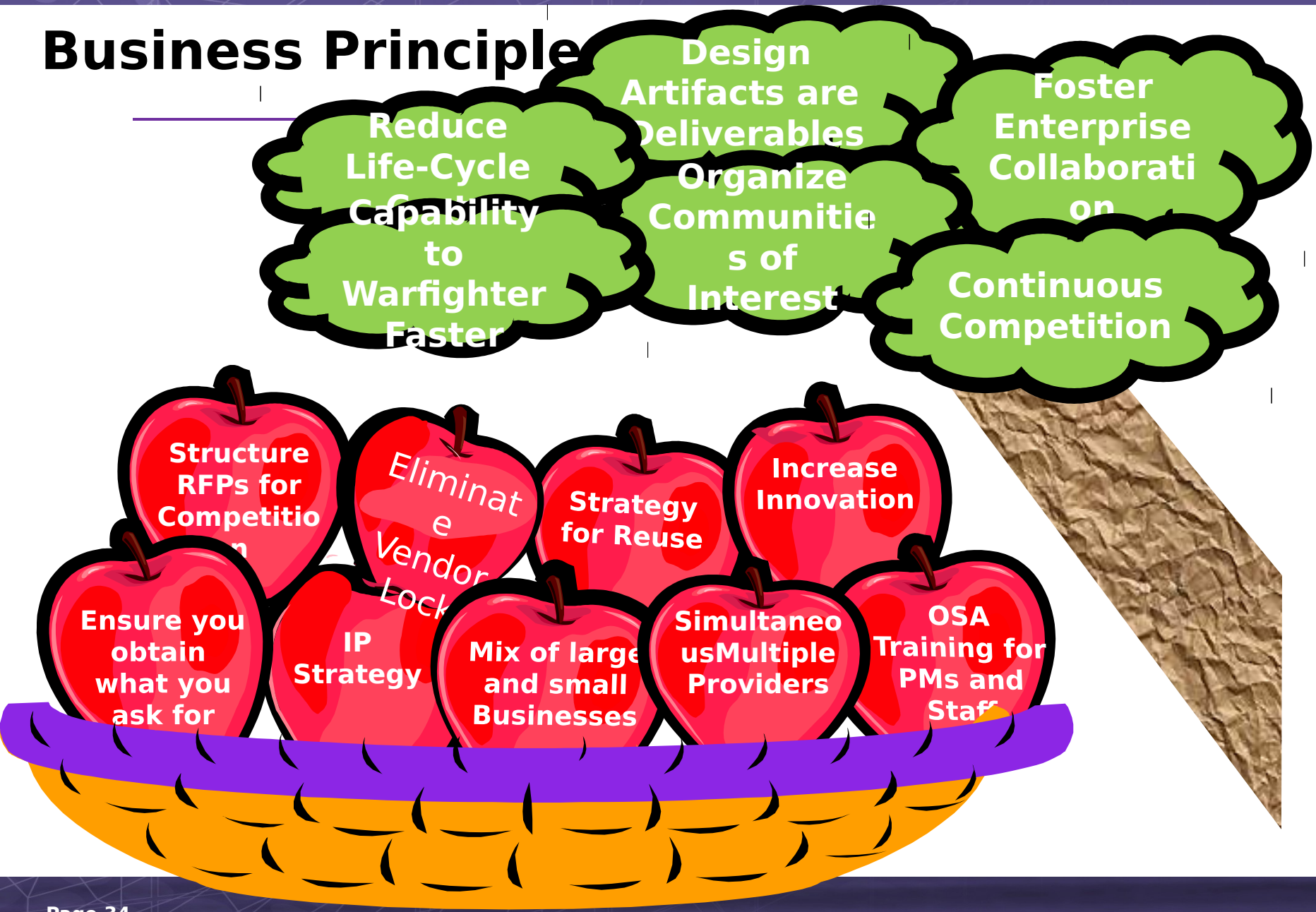
11 Appendices for Strategy and Execution

* https://acc.dau.mil/osaguidebook

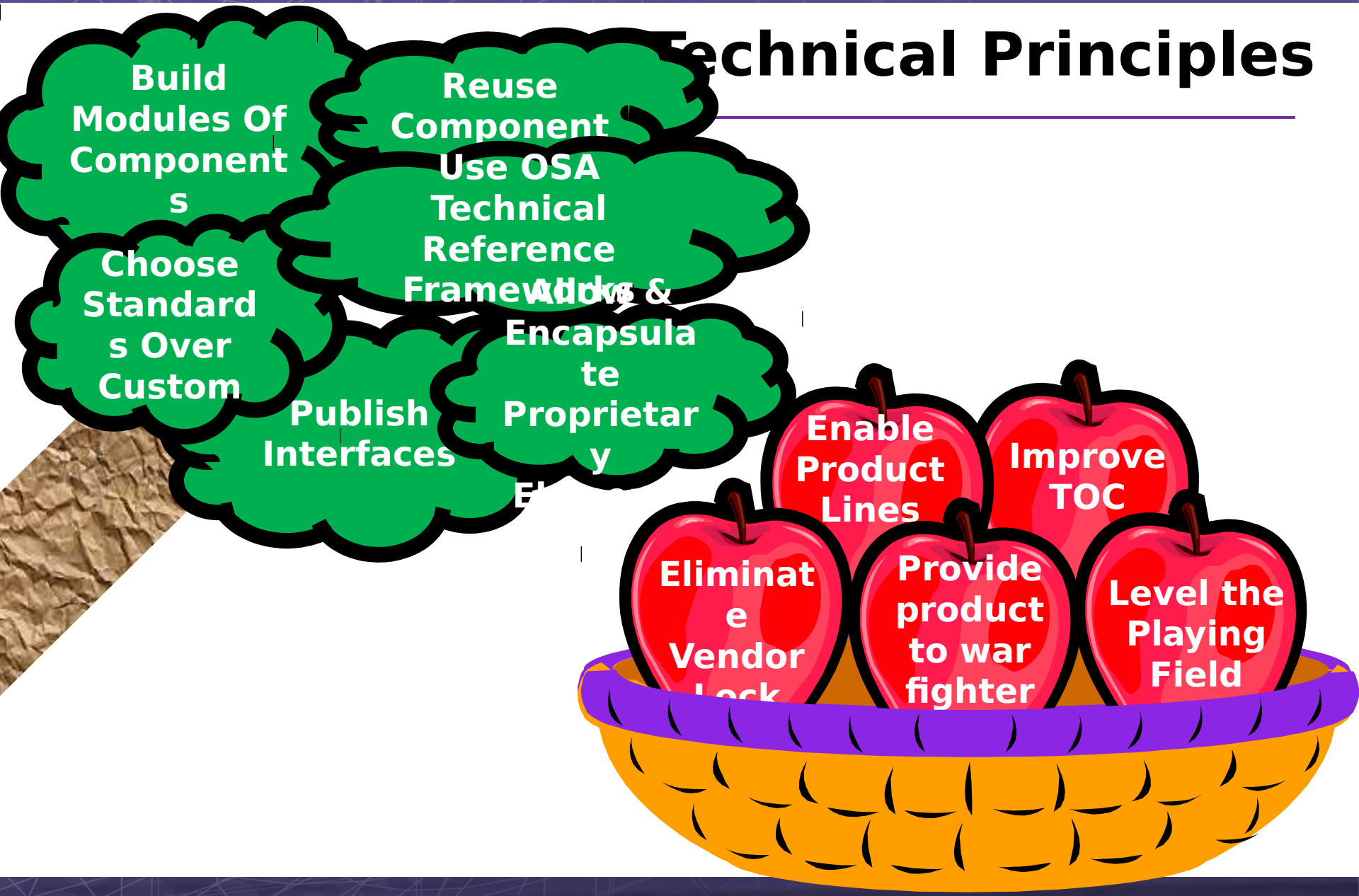
C - Statement of Work

- Open Systems Approach & Goals
- Software Development Plan
- Integrated Development Environment
- Product Reuse
- OSA Approach to Technical Development Reviews

Business Principle



Technical Principles



H - Additional Special Contract Requirements

Early and often technical disclosure throughout development cycle

- Process for access and transparency of design artifacts
- Forge.mil Program (http://www.forge.mil)

Identify restrictions on use of technical data and software

- Pre-award identification and assertion
- Copies of negotiated, commercial and non-standard licenses

Contractor use of commercial computer software including OSS

- Shall not create any Government distribution obligation
- Request permission to use commercial computer software

Specially negotiated license rights for Government use of data

L&M - Instructions to Offerors and Eval. Criteria

Factors include:

- Technical approach and processes
- Interface design and management
- Life Cycle management and open systems
- System compliance with OSA guidance
- Open Systems Architecture management approac
- Data rights and patent license rights

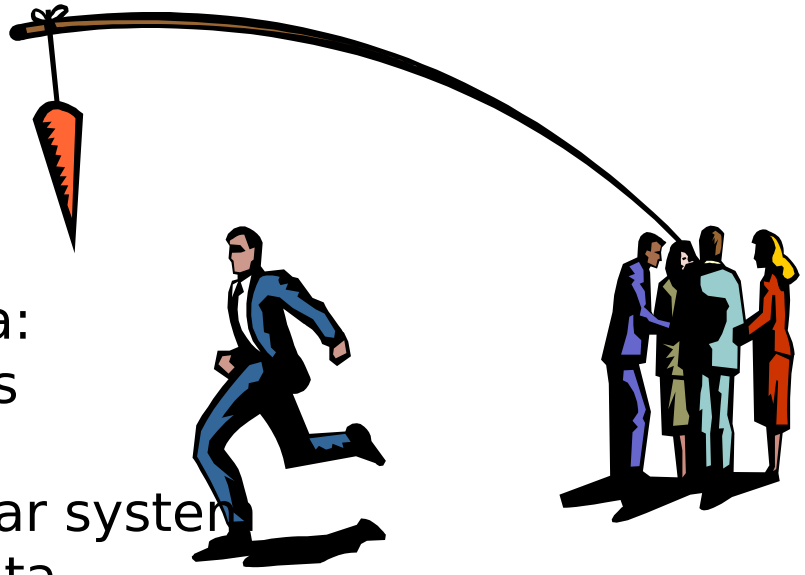
OSA Proposal Requirement

Submission of Open System Management Plan:

- Approach for OSA technical frameworks and services
- Approach to sharing of design information
- How architecture approach will allow technology refresh
- Description of asset reuse approach
- Description of modular open systems approach (MOSA)

Incentivizing Contractors

How do we balance the government getting the best OSA deal and industry making a profit?



Suggested OSA related award fee criteria:

- Commonality and reuse of components
- Modularity of products
- Implementation of layered and modular system
- Early and often disclosure of design data
- Use of open, standards-based interfaces with at least GPR
- Incorporation of components from external sources

Appendices

Recommended CDRL and Deliverable Items

OSA Checklist (short)

OSA Checklist (long)

Recommended Data Language for Code headers

Open Source Software

Assessing Intellectual Property Rights

Glossary of Terms

Clickwrap or Embedded License Issues

Better Buying Power

Breaking and Avoiding Vendor Lock

Sample CDRLs

OSA Checklists

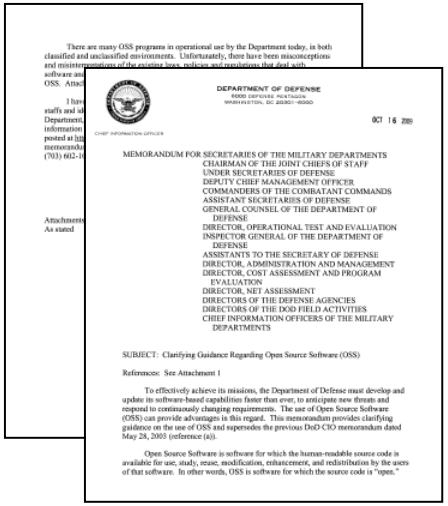
Developed to facilitate implementation of OSA

- Easy way to check system OSA implementation

Short checklist intended to check on programmatics

Long version is aligned to the six principles of DoD OSA

Open Source Software Guidance



DEPARTMENT OF DEFENSE
6000 DEFENSE PENTAGON
WASHINGTON, DC 20301-6000

CHIEF INFORMATION OFFICER

OCT 16 2009

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
CHAIRMAN OF THE JOINT CHIEFS OF STAFF
UNDER SECRETARIES OF DEFENSE
DEPUTY CHIEF MANAGEMENT OFFICER
COMMANDERS OF THE COMBATANT COMMANDS
ASSISTANT SECRETARIES OF DEFENSE
GENERAL COUNSEL OF THE DEPARTMENT OF DEFENSE
DIRECTOR, OPERATIONAL TEST AND EVALUATION
INSPECTOR GENERAL OF THE DEPARTMENT OF DEFENSE
ASSISTANTS TO THE SECRETARY OF DEFENSE
DIRECTOR, ADMINISTRATION AND MANAGEMENT
DIRECTOR, COST ASSESSMENT AND PROGRAM EVALUATION
DIRECTOR, NET ASSESSMENT
DIRECTORS OF THE DEFENSE AGENCIES
DIRECTORS OF THE DOD FIELD ACTIVITIES
CHIEF INFORMATION OFFICERS OF THE MILITARY DEPARTMENTS

SUBJECT: Clarifying Guidance Regarding Open Source Software (OSS)

References: See Attachment 1

To effectively achieve its missions, the Department of Defense must develop and update its software-based capabilities faster than ever, to anticipate new threats and respond to continuously changing requirements. The use of Open Source Software (OSS) can provide advantages in this regard. This memorandum provides clarifying guidance on the use of OSS and supersedes the previous DoD CIO memorandum dated May 28, 2003 (reference (a)).

Open Source Software is software for which the human-readable source code is available for use, study, reuse, modification, enhancement, and redistribution by the users of that software. In other words, OSS is software for which the source code is "open."

DoD Memorandum Clarifying Guidance Regarding OSS
16 Oct 2009

- **Benefits of OSS**
- **Awareness of the Government's interests**
- **Understand where OSS is better for your program.**

Assessing Intellectual Property Rights

Programs to identify and manage intellectual property

Guidebook gives details on data rights assessment questions

Discusses points to consider when performing an assessment

Criteria for selection of the FAR and DFARS related to IPR

Good Program Design and Intellectual Property Strategy

Data Language for Code Headers

Deliverables with embedded comments to enable reuse

Used for types of licensing rights:

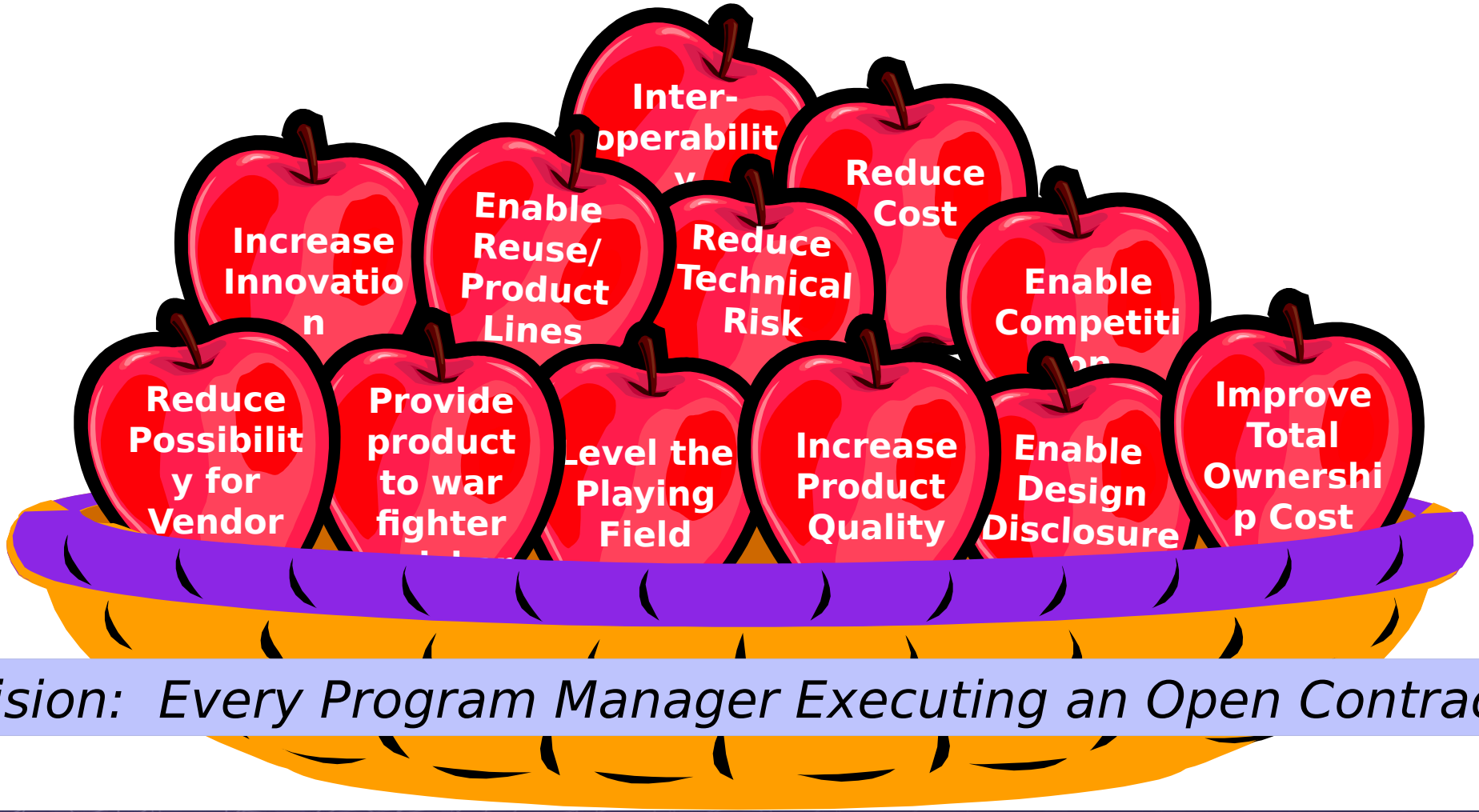
- Unlimited Rights
- Government Purpose Rights
- Specially Negotiated License Rights

Recommended OSA CDRL and Deliverables

Examples:

- Open systems management plan
- Results of periodic OSA assessments
- Common data model for the system
- Executable code
- Software test programs and source code
- Interface requirement specification

Benefits from the PMs OA Guidebook



Vision: Every Program Manager Executing an Open Contract

Differences from V 0.1 (December 2011)

1. Improved guidance on data rights licensing strategy and business modeling
2. Rewrote the Open Source Software Guidance section
3. Rewrote the Introduction
4. Updated and revised material on Data Rights
5. Resolved inconsistencies across the chapters and appendices

Participation by all services, OSD OGC and DAU by subject matter experts from different disciplines

Competition

- Reward Strategic Reuse
- Enforce Open Architecture
- Manage the Market
- Involve Small Business
- Data Rights Level the Field

Buy More for Less!

Questions or Comments?

Backup on OSS

Considerations for OSS

Inability to Negotiate

Viral Licenses

Authorization and Consent

Use of OSS Under a Contract but Not for Delivery

What to Know

What is open source software

Licensing constraints

How the open source software will be used

Likelihood of modification and/or distribution to third parties

How OSS’s modifications impacts on non-open source software

OSS Licenses

Sample language to prevent use of “clickwrap” licenses

- Addresses contractor, sub-contractor or third party licenses

Contractor must

- Identify open source software
- Provide copies of any and all licenses
- Ensure Government is permitted to use the deliverables
- Comply with any and all requirements of the licenses